US ERA ARCHIVE DOCUMENT

HED Records Center Series 361 Science Reviews - File R109743 - Page 1 of 33

Rm-8169, CM-2 H7509e

EXPEDITE

OPP OFFICIAL RECORD HEALTH EFFECTS DIVISION SCIENTIFIC DATA REVIEWS EPA SERIE:

72-HOUR REVIEW

TO: JANE SMITH, CEB

CHEMICAL(s): 169160 and 107401

CASE NO.: 3148

This DCI is being sent to you for a 72-hour review. contact Alan Dixon at one of the numbers listed below by writing, by phone or by FAX. We must hear from you within 72 hours if you have any comments/corrections OR IF EVERYTHING IS ACCEPTABLE.

WE MUST HEAR FROM YOU.

THANK YOU VERY MUCH FOR YOUR ASSISSTANCE.

CONTACT: Alan Dixon PHONE: 308-8043 FAX: 308-8773

MAIL CODE: H7508W

DELIVERY DATE: 8/3/93

DUE DATE: 8/5/03
This is Jane + THOA'S together.
HOD Concuss W/ comments... see inside

8/4/93 11. 11

DRA	3 1				:		Page 1 of 1
	United States Environme Washington,	ronm gton	Environmental shington, D.C.	Protection Agency 20460	Šī		Form Approved
	rroutrements status	S AND		registrant's response	M		Approval Expires 03-31-90
INSTRUCTIONS: Please type or print in ink. Use additional sheet(s) if necessary	ype or print in ink. Please read carefully the) if necessary	ılly th	L I	attached instructions and supply the information requested on this form.	e information reques	ted on this form.	
1. Company name and Address	dress	2.	_	Case # and Name 3148 Trimethoxysilyl quats Chemical # and Name 107401 Trimethoxysilyl)propyl dimethyl octadecyl ammonium chloride	quats adecyl ammonium chlo	m.	Date and Type of DCI GENERIC
4. Guideline Requirement Number	5. Study Title		Progress Reports	6. Use Pattern 3	7. Test Substance	8. Time Frame	9. Registrant Response
63-4 63-5 63-8 72-1(a) 72-2(a) 83-3(a) 161-1	Debruich Point Solubility Fish toxicity bluegill Fish toxicity rainbow trout Invertebrate toxicity Teratogenicity - rat Mydrolysis	*		all all crano crano crano		12 mos. 12 mos. 12 mos. 12 mos. 12 mos. 12 mos.	
10. Certification I certify that the statements made I acknowledge that any knowlingly for or both under applicable law. Signature and fitte of Company's Au	10. Certification I certify that the statements made on this form and all attachments ar I acknowledge that any knowingly false or misleading statement may be or both under applicable law. Signature and Title of Company's Authorized Representative	ments a		e true, accurate, and complete. punishable by fine, imprisorment		11. Date	
12. Name of Company Contact	ntact					13. Phone Number	

08/03/93

Company: 034292 DOW CORNING CORP.

MIDLAND, MI

Chemical: 107401 Trimethoxysilyl) propyl dimethyl octadecyl ammonium chloride

Case: 3148 EPA Manager: Margarita Collantes

	······································		
GDLN #	DESCRIPTION	REGISTRANT'S COMPLIANCE/MRID	EPA DECISION
61-1	Chemical Identity	130316-St	Accept
61-1	Chemical Identity	164909-St	Accept
61-1	Chemical Identity	42456501-St	Denied/Def.
		ential Statement o lful this guidleir	of Formula and does ne requirement.
61-1	Chemical Identity	42456508-St	Accept
	Comments: This MRID was inceeded as the series guidle.	correctly labeled lines.	to satisfy the
61-2(a)	Begin. mat. & mnfg. proc	130316-St	Accept
61-2(a)	Begin. mat. & mnfg. proc	164909-St	Accept
61-2(a)	Begin. mat. & mnfg. proc	42456502-St	Accept
61-2(b)	Discussion of Impurities	130316-St	Accept
61-2(b)	Discussion of Impurities	164909-St	Accept
61-2(b)	Discussion of Impurities	42456502-St	Accept
62-1	Preliminary Analysis	42456507-St	Accept
62-2	Certification of limits	42456505-St	Accept

08/03/93

Chemical: 107401 Company: 034292

GDLN #	DESCRIPTION	REGISTRANT'S COMPLIANCE/MRID	EPA DECISION
62-3	Analytical Method	42456504-St	Accept
62-3	Analytical Method	42456506-St	Accept
63-2	Color	70190-St	Accept
63-2	Color	129655-St	Accept
63-2	Color	130316-St	Accept
63-3	Physical State	70190-St	Accept
63-3	Physical State	129565-St	Accept
63-3	Physical State	130316-St	Accept
63-4	Odor		Data Gap
63-4	Odor	70190-St	Denied/Def.
63-4	Odor	42456508-St	Denied/Def.
63-5	Melting Point	N/A	Accept
	Comments: The TAGI is a la	iquid at room tempe	erature.
63-6	Boiling Point	70190-St	Accept
63-6	Boiling Point	129565-St	Accept
63-6	Boiling Point	130316-St	Accept
63-7	Density	70190-St	Accept

08/03/93

Chemical: 107401 Company: 034292

Comments:

GDLN #	DESCRIPTION		REGISTRANT'S COMPLIANCE/MRID	EPA DECISION
		-		
63-7	Density		123565-St	Accept
63-7	Density		130316-St	Accept
63-8	Solubility	*		Data Gap
	Comments:	The registrant muthis guideline by in grams per 100	reporting the an	ct chemistry for mount of AI soluble
63-8	Solubility		70190-St	Upgradable
63-8	Solubility		129565-St	Upgradable
63-8	Solubility		130316-St	Upgradable
63-9	Vapor Press	ure	N/A	Accept
	Comments:	Not applicable. T polymerizes in th		ctive silane which isture.
63-10	Dissociatio	n Constant	N/A	Accept
	Comments:	Not applicable. The hydrolyzable alkorotronic quaterna completely ionized	oxy silane functionry ammonium salt,	onality. As a , the TGAI will
63-11	Oct/Water p	artition Coef.	N/A	Accept

Not Applicable. The TGAI is highly polar.

Chemical: 107401 Company: 034292

GDLN #	DESCRIPTION	REGISTRANT'S COMPLIANCE/MRID	EPA DECISION
63-12	рН	70190-St	Accept
63-12	рН	130316-St	Accept
63-13	Stability	. vec	
	Comments:	Only thermostability was conducted of the TGAI to elevated temperatur decomposition reported at 125½C. Fambient light showed no changes in substance. No stability tests were however, for metals or metal ions to the registrant, packaging and undoes not encounter metals or metal	es with slow further, exposure to the test conducted, since, according se of the product
63-13	Stability	70190-St	Accept
63-13	Stability	130316-St	Accept
63-13	Stability	42456509-St	Accept
63-13	Stability	42456510-St	Accept
63-17	Storage stal	oility 42456510-St	Accept

Comments:

The submitted storage stability for Dow Corning 5700 Antimicrobial Agent is adequate. No additional data is needed.

In the study five samples from two lots of Dow Corning 5700 Antimicrobial Agent were stored under room temperature for a period of 14 months. Analysis for total amines and the quat salt showed no changes in the contents at the conclusion of the study.

08/03/93

Chemical: 107401 Company: 034292

GDLN # DESCRIPTION COMPLIANCE/MRID EPA DECISION

MRID Comments Continued:

71-1(a) Acute avian oral quail/duck 93218033-Re Denied/Def.

71-1(a) Acute avian oral quail/duck 40385218-St Denied/Def.

Comments: The avian acute oral LD50 study with the mallard

duck was categorized as "supplemental". Although a NOEL could not be determined and birds regurgitated feed at the highest test concentration, no mortality was observed at the three lowest test concentrations and only one bird died at the second highest test level (1,500 mg/Kg). EPA will not require a new study unless registration for outdoor uses are

08/03/93

requested.

71-2(b) Acute avian diet. duck 93218034-Re Denied/Def.

71-2(b) Acute avian diet. duck 40385217-St Denied/Def.

Comments: The acute dietary LC50 study was scientifically

sound but did not meet guideline requirements. This study was categorized as "supplemental" due to the failure to use properly aged birds. While this study

fails to support an avian acute dietary data

requirement, the Agency will not require a new study unless registration for outdoor uses are requested.

72-1(a) Fish toxicity bluegill Data Gap

72-1(a) Fish toxicity bluegill 40385202-St Denied/Def.

Comments: The acute fish toxicity studies submitted were conducted at the Industrial Bio Test Laboratories,

Chemical: 107401 034292 Company:

DESCRIPTION

GDLN #

REGISTRANT'S

COMPLIANCE/MRID

EPA DECISION

08/03/93

MRID Comments Continued:

Inc. The EPA does not accept data generated by this facility. The fish acute toxicity data were categorized as invalid, therefore this data requirement has not been fulfilled. Either the Bluegill or Rainbow Trout study will need to be repeated by a recognized facility to meet this data requirement.

72-1(c) Fish toxicity rainbow trout

Data Gap

72-1(c) Fish toxicity rainbow trout 40385202-St

Denied/Def.

Comments:

The acute fish toxicity studies submitted were conducted at the Industrial Bio Test Laboratories. Inc. The EPA does not accept data generated by this facility. The fish acute toxicity data were categorized as invalid, therefore this data requirement has not been fulfilled. Either the Bluegill or Rainbow Trout study will need to be repeated by a recognized facility to meet this data requirement.

72-2(a) Invertebrate toxicity

Data Gap

72-2(a) Invertebrate toxicity

93218037-Re

Denied/Def.

72-2(a) Invertebrate toxicity

40385215-St

Denied/Def.

Comments:

The acute invertebrate toxicity study was categorized as "supplemental". The study does not fulfill guideline requirements for an invertebrate acute toxicity study, and a new study will be

Chemical: 107401 Company: 034292

GDLN # DESCRIPTION

REGISTRANT'S COMPLIANCE/MRID

EPA DECISION

08/03/93

MRID Comments Continued:

required for the current use.

81-1 Acute oral tox. rat

40385201-St

Accept

Comments:

A summary of MRID 40385201 was submitted to the Agency. This study was previously reviewed and graded core Minimum. The following deviations were noted:

1) individual observations done on day 1, 7 and 14; and 2) gross necropsy not done. However, due to the high LD50 (12.27 g/kg) it is not necessary to repeat

the study and it remains graded core Minimum.

81-1 Acute oral tox. rat

42456511-St

Pending

Comments:

This study is tentatively accepted for review.

81-2 Acute dermal tox. rabbit/rat

Comments:

A study (summary) with the 72% formulation (tested to limit dose) was submitted by YAK. This study is

acceptable for review.

Note: Once the Registrant officially submits this

study a MRID No. will be assigned.

81-2 Acute dermal tox. rabbit/rat 41339402-St

Comments:

This is a 14-day rangefinding study for dermal

toxicity in rats.

Chemical: 107401 Company: 034292

GDLN # DESCRIPTION REGISTRANT'S

COMPLIANCE/MRID

EPA DECISION

08/03/93

MRID Comments Continued:

The following deviations exist:

1) 2 animals/sex/group (5 animals/sex/group);

2) animals dosed for five consecutive days a week for

fourteen days (Dosing, single dermal); and 3) material left in contact for a period of 6

hours/day, 5 days per week. The highest dose group

tested was 1,000 mg/kg/day. The material was

suspended in propylene glycol.

81-2 Acute dermal tox. rabbit/rat 42456512-St

> Comments: This submission was reviewed with MRID 41339402.

> > Please see the comments for MRID 41339402.

Acute inhal, tox rat 81-3 40385219-St Denied/Def.

> This study is unacceptable for review Comments:

93218028-Re 81-3 Acute inhal, tox rat Accept

81-3 Acute inhal. tox rat 41157803-St Accept

> Comments: Summary of MRID 41157803 previously submitted and

reviewed by the Agency. The study was graded core Suplimentary, and was upgradable if the purity was supplied. This summary states the purity to be 72.1%. The Registrant supplied additional information by war

that allows this study to be upgraded to core

Minimum.

Chemical: 107401 Company: 034292

GDLN # DESCRIPTION

REGISTRANT'S

COMPLIANCE/MRID E

EPA DECISION

08/03/93

MRID Comments Continued:

81-4 Primary eye irration-rabbit 40385201-St Accept

Comments: Summary of MRID 40385201 previously submitted and

reviewed by the Agency, and graded core Minimum. The following minor deviation was noted: left eye washed within 30 seconds of dosing and right eye washed 1 hour post dosing (24 hours required in guideline).

81-4 Primary eye irration-rabbit 41157801-St Denied/Def.

Comments: Summary of MRID 41157801 previously submitted to the

Agency. The following deviations were noted: 1) only 1 rabbit used (guideline requires 6); and 2) left eye

washed within 30 seconds of dosing and right eye washed 1 1/2 hours post dosing (24 hours required in quideline). The study is Core Supplemental and not

upgradable.

81-4 Primary eye irration-rabbit 41157802-St Denied/Def.

Comments: Summary of MRID 41157802 previously submitted to the

Agency. The following deviations were noted: 1) only 1 rabbit used (guideline requires 6); and 2) left eye washed within 30 seconds of dosing and right eye washed 1 1/2 hours post dosing (24 hours required in quideline). The study is Core Supplemental and not

upgradable.

81-5 Primary dermal irritation 40385201-St Denied/Def.

Comments: Summary of MRID 40385201 previously submitted and

Chemical: 107401 Company: 034292

GDLN # DESCRIPTION

REGISTRANT'S COMPLIANCE/MRID

EPA DECISION

08/03/93

MRID Comments Continued:

reviewed by the Agency, and core graded Supplementary. The Agency requested,

"...clarification as to the method of application prior to coming to a conclusion with regard to this study." Also from the summary a number of deviations from the guideline were noted and this study cannot be ungraded.

81-5 Primary dermal irritation 41157801-St Denied/Def.

Comments:

Summary of MRID 411157801 previously submitted to the Agency. A number of deviations were noted: 1) only one animal per dose level; 2) amount applied was between three sites (Guidelines: dosing, single dermal); 3) duration of exposure was 14 days (Guidelines: dosing duration 4 hours); and 4) test material was not removed nor washed with water. This

study is Supplementary and not upgradable.

81-5 Primary dermal irritation 41157802-St Denied/Def.

Comments:

Summary of MRID 411157802 previously submitted to the Agency. A number of deviations were noted: 1) only one animal per dose level; 2) amount applied was between three sites (Guidelines: dosing, single dermal); 3) duration of exposure was 14 days (Guidelines: dosing duration 4 hours); and 4) test material was not removed nor washed with water. This study is Supplementary and not upgradable.

81-5 Primary dermal irritation 42456513-St Pending

08/03/93

Chemical: 107401 Company: 034292

GDLN # DESCRIPTION REGISTRANT'S
COMPLIANCE/MRID EPA DECISION

Comments: This study is tentatively acceptable for review.

81-6 Dermal sensitization 42197401-St Pending

Comments: This study is tentatively acceptable for review.

90-day dermal-rodent 41339403-St Pending

Comments: This study is tentatively acceptable for review.

83-3(a) Teratogenicity - rat Data Gap

83-3(a) Teratogenicity - rat 41438002-St Upgradable NOT UPGRADAG

Comments: This is a rangefinding study. See comments for MRID #

41438003.

83-3(a) Teratogenicity - rat 41438003-St Upgradable

Comments: Summary of MRID 41438003 previously submitted and

reviewed by the Agency, was graded core Supplementary. This study is upgradable by

identification of compound purity.

83-3(a) Teratogenicity - rat 42456514-St Upgradable

Comments: MRID# 42456514 is a revision of MRID# 41438002.

Chemical: 107401 Company: 034292

GDLN # DESCRIPTION

REGISTRANT'S

COMPLIANCE/MRID

EPA DECISION

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MRID Comments Continued:

83-3(a) Teratogenicity - rat

42456515-St

Upgradable

Comments:

MRID# 42456515 is a revision of MRDI# 41438003.

84-2(a) Gene mutation-ames

41296801-St

Pending

Comments:

MRID's 42456518, 41353302, 41353301, 41296801

Mouse Lymphoma, This study is tentatively ready for

review.

TORWARD MUTATION ASSAY

84-2(a) Gene mutation-ames

41353301-St

Pending

Comments:

MRID's 42456518, 41353302, 41353301, 41296801

Mouse Lymphoma. This study is tentatively ready for

review.

84-2(a) Gene mutation-ames

42456516-St

Pending

Comments:

MRID's 42456516, 42456519

Bacterial Reverse Mutation. This study is tentatively ready

for review.

84-2(a) Gene mutation-ames

42456519-St

Pending

Comments:

MRID's 42456516, 42456519

BACTERIAL Reverse Mutation. This study is tentatively ready for

review.

84-2(a) Gene mutation-ames

42465618-St

Pending

08/03/93

Chemical: 107401

Company: 034292

84-4

GDLN #	DESCRIPTION	· · · · · · · · · · · · · · · · · · ·	REGISTRANT'S COMPLIANCE/MRID	EPA DECISION
	Comments:	MRID's 42456518, Mouse Lymphoma. Treview.		01, 41296801 tatively ready for
84-2(a)	Gene mutati	on-ames	93218039-Re	Pending
84-2(a)	Gene mutati	on-ames	28990-St	Pending
84-2(a)	Gene mutati	on-ames	93218040-Re	Pending
84-2(a)	Gene mutati	on-ames	41353302-St	Pending
	Comments:	MRID's 42456518, Mouse Lymphoma. Treview.		01, 412976801 tatively ready for
84-2(a)	Other Genotos Gene mutati	xic Effects on-ames	93218045-Re	NOT ACCOPTABLE (FOR REVIEW
84-7 (a)	Other Genote Gene-mutati	oxic effects on-ames	40385213-St	Pending Un ACCOTTAGUE
84-2(b)	Struct. chr	om. aberration	41296802-St	Pending
	Comments:	This study is ter	ntatively acceptal	ble for review.
(84-2(b)	Struct. chr	om. aberration	42456517- S t	Pending
a)	Comments:		on of MRID 412968	52? 03, IN VIVO mouse tively acceptable

Pending

Other genotoxic effects 41296804-St

Chemical: 107401 Company: 034292

GDLN # DESCRIPTION REGISTRANT'S COMPLIANCE/MRID

EPA DECISION

08/03/93

Comments:

This study is tentatively acceptable for review.

(unscheduled DNA Synthesis Assay in RAT HEPATOLYK)

84-4 Other genotoxic effects 93218039-Re

UNACCEPTABLE for BEVIEW

84-4 Other genotoxic effects

40385212-St

Denied/Def.

Comments:

Reformat of 00028990 (40385212) previously submitted

and reviewed by the Agency, and graded Not

Acceptable. The following deficiencies were noted in the original review: 1) actual doses not provided; 2) number of replicate plating at each level does not represent an adequate statistical sample; 3) exposure

time of 24 hours to short

(3 days recommended); 4) procarcinogen instead of a direct acting agent should have been used; and 5) a quality assurance/GLP form was missing. The reformat does not adequately address these issues.

This study is unacceptable for review.

84-4 Other genotoxic effects

93218045-Re unacceptable for review

84-4 Other genotoxic effects 40385213-St

Denied/Def.

Comments:

Reformat of MRID No. 40385213 previously submitted and reviewed by the Agency, and core graded Not Acceptable. The following deficiencies existed in the original report: 1) exposure time of 2 hours is smaller than the normal 3 days; and 2) Actual doses not reported. The reformat does not adequately address these issues. The study is unacceptable for

review.

Chemical: 107401 Company: 034292

GDLN # DESCRIPTION REGISTRANT'S COMPLIANCE/MRID

EPA DECISION

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MRID Comments Continued:

General metabolism 85-1

> Comments: This study is currently not required. It is reserved

and may be triggered depending on Teir 1 study

results.

General metabolism 85-1

93218041-Re

Denied/Def.

85-1 General metabolism 57346-St

Denied/Def.

Comments:

Although submitted as a summary (93218031) of MRID No. 00057346, this is actually a dermal absorption study (see 85-2). In addition, a reformat (93218041) of MRID No. 00057346 was submitted. A number of deficiencies were noted in the supplied summary, including: 1) 3 animals per sex per group; 2) only one dose for dermal (66.5 ug) and intravenous (69.4 ug). This study is not acceptable for review as a 85-1 Metabolism study. The study was requested by

Toxicology Branch to determine the percutaneous absorption of the active agent in rabbits. The study is actually a dermal absorption study. Currently not

required.

85-2 Dermal penetration

Comments:

This study is currently not required. It is reserved

and may be triggered depending on Terf 1 study rier

results.

85-2 Dermal penetration 57346-St Upgradable

93218023, 40385214, 00057341

Chemical: 107401 Company: 034292

GDLN #

REGISTRANT'S

COMPLIANCE/MRID

EPA DECISION

08/03/93

Comments:

DESCRIPTION

Summary of Accession No. 244089 previously reviewed by the Agency, and graded core Supplementary. The following information was requested at the time of

the review:

required.

1) control animal tissue backgrounds will be necessary to evaluate possible AC activity in the p. cut. and i. v. group tissues; 2) additional control tissue background needed; and 3) untreated cloth collar digestant background should be submitted. The study may be upgradable with the requested information. However, this study is currently not

(carbon 14)

161-1 Hydrolysis

Data Gap

Comments:

The Agency requires a hydroloysis study because this is an industrial microbiocide covered by a National Pollutant Discharge Elimination System

permit.

171-4(c) Res. analyt. method - plant

These studies and their reformats are on the Comments:

durabilty of this product on textiles. This data will

be reviewed in Phase 5.

171-4(c) Res. analyt. method - plant 93218042-Re Pending

171-4(c) Res. analyt. method - plant 40385214-St Pending

171-4(c) Res. analyt. method - plant 93218043-Re Pending

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	United States Environmen Washington, 1	ronme	ontal D.C.		Protection Agency 20460	4		Form Approved ONB No. 2020-0107
	PROUT. PERCENTS STATUS			ISTR	registrant's response			Approval Expires 03-31-9.
INSTRUCTIONS: Please type or print in ink. Use additional sheet(s) if necessary	ة. آخ	lly the	attache	d insti	Please read carefully the attached instructions and supply the information requested on this form	information reques	ted on this form.	
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4. Guideline Requirement Number	5. Study Title	-	Progress Reports	m	6. Use Pattern	7. Test Substance	8. Time Frame	9. Registrant Response
62-1 Certi 63-8 Solut 63-13 Stabi 72-1 (d) Fish 72-2 (a) Three 83-3 (a) Terst 84-2 (b) Structon 10. Certification 1 Certify that the statements I certify that any knowing or both under applicable law.	minary Analysis fication of Limits ility Lity Loxicity rainbow trout-TEP tembrate toxicity coemicity - rat mutation-mass t. chrom. aberration Lymins made on this form and all attach gity false or misleading atatement y's Authorized Representative		c true,	MW MWW MIN THE PARTY OF T			12 mos. 13 mos. 11. pate	
12. Name of Company Contact	ntact		 				13. Phone Number	

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Identity of product inert ingredients.	
Identity of product impurities.	
Description of the product manufacturing process	3 .
Description of quality control procedures.	
Identity of the source of product ingredients.	•
Sales or other commercial/financial information.	.
A draft product label.	
The product confidential statement of formula.	
Information about a pending registration action.	
FIFRA registration data.	
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information not included is generally considered co	



R109743

Chemical: 1-Octadecanaminium, N,N-dimethyl-N-(3-(t

PC Code: 107401

HED File Code 13000 Tox Reviews

 Memo Date:
 08/05/1993

 File ID:
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 Accession Number:
 412-05-0095

HED Records Reference Center 06/13/2005